

WHAT IS CLAIMED IS:

1. An X-ray detecting device having X-ray detecting cells arranged at intersections between data lines and gate lines, said device comprising:

a ground line that extends along a column direction, said ground line connected to a plurality of X-ray detecting cells so as to apply a ground voltage;

a storage electrode connected to said ground line, said storage electrode electrically connected to said plurality of X-ray detecting cells; and

a pixel electrode in each X-ray detecting cell of said plurality of X-ray detecting cells.

2. The X-ray detecting device according to claim 1, further comprising:

a thin film transistor having a gate electrode connected to a gate line; a source electrode connected to a data line; and a drain electrode connected to a pixel electrode.

3. The X-ray detecting device according to claim 2, further comprising:

a gate insulating film insulating said gate electrode, said source electrode, and said drain electrode;

a storage-insulating layer covering said source electrode and said drain electrode;

a protective film on said storage insulating layer; and

a drain contact hole for allowing said pixel electrode and said drain electrode to be in electrical contact with each other.

4. The X-ray detecting device according to claim 3, further comprising:

a transparent storage electrode overlapping said storage electrode, wherein said storage insulating layer is interposed therebetween; and

a storage contact hole for allowing said pixel electrode and said transparent storage electrode to be connected through said protective film.

5. The X-ray detecting device according to claim 4, wherein said transparent storage electrode is formed from a transparent conductive material that is selected from a group consisting of indium-tin-oxide (ITO), indium-zinc-oxide (IZO), and indium-tin-zinc-oxide (ITZO).

6. The X-ray detecting device according to claim 4, wherein said ground line is formed from a group consisting of chrome (Cr) and molybdenum (Mo).

7. The X-ray detecting device according to claim 1, further comprising an auxiliary data line formed along each of said data lines.

8. The X-ray detecting device according to claim 4, wherein said auxiliary data line is formed from a transparent conductive material that is selected from indium-tin-oxide (ITO), indium-zinc-oxide (IZO) and indium-tin-zinc-oxide (ITZO).

9. The X-ray detecting device according to claim 1, wherein said column direction extends parallel to said data lines.

10. A method of fabricating an X-ray detecting device having X-ray detecting cells arranged at intersections between data lines and gate lines, the method comprising the steps of:

forming a gate-insulating layer on a substrate and over the gate lines;

forming a storage electrode connected to adjacent X-ray detecting cells along a column direction;

forming a ground line connected to the storage electrode so as to apply a ground voltage to the adjacent X-ray detecting cells;

coating a storage insulating film on the gate insulating film;

forming a storage electrode for preventing etching of the storage-insulating layer;

forming a protective film on the storage insulating film;

defining a contact hole in the protective film; and

forming a pixel electrode connected, via the contact hole, to an electrode on the protective film.

11. The method according to claim 10, further comprising the steps of:

forming a gate electrode connected to a gate line;

forming a source electrode connected to a data line and a drain electrode connected to a pixel electrode on the gate insulating film; and

forming a drain electrode connected to the pixel electrode.

12. The method according to claim 10, wherein the storage electrode is formed from a transparent conductive material that is selected from indium-tin-oxide (ITO), indium-zinc-oxide (IZO) and indium-tin-zinc-oxide (ITZO).

13. The method according to claim 10, wherein the ground line is formed from chrome (Cr) or molybdenum (Mo).

14. The method according to claim 10, further comprising the step of forming an auxiliary data line along a data line.

15. The method according to claim 14, wherein the auxiliary data line is formed from a transparent conductive material that is selected from a group consisting of indium-tin-oxide (ITO), indium-zinc-oxide (IZO) and indium-tin-zinc-oxide (ITZO).